

## X.—On the Birds of Paraguay.—Part II.

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## 36. CONURUS LEUCOPHTHALMUS.

*Psittacus leucophthalmus* Müll. Syst. Nat. Suppl. p. 75 (1778).

*Maracana verde* Azara, Apunt. i. p. 415. no. cclxxv. (1802).

*Conurus parvus* (Bodd.); Hartl. Ind. Azara, p. 17 (1847); Berlepsch, J. f. O. 1887, p. 25 (Lambaré).

*Conurus leucophthalmus* Salvad. Cat. B. Brit. Mus. xx. p. 187 (1891); Ihering, Revista Mus. Paulista, vi. p. 335.

a. ♀ imm. Sapucay, April 28, 1903.

Bill of a dirty cream-colour; feet dirty greyish brown; iris red, tinged with yellow. Shot in monte.

This example answers well to Count Salvadori's description of the young bird, having the bend of the wing yellowish green, very little red on the under wing-coverts, and no yellow or red on the thighs, which are green.

b. ♀ ad. Sapucay, April 20, 1903.

Bill dirty yellowish white; tarsi and feet grey; iris reddish orange.

## 37. PYRRHURA CHIRIPEPE.

*Chiripepé* Azara, Apunt. ii. p. 429, no. cclxxxi (1805).

*Psittacus chiripepé* Vieill. N. Dict. d'Hist. Nat. xxv. p. 361 (1817: ex Azara).

*Conurus chiripepé* Hartl. Ind. Azara, p. 18 (1847).

*Conurus vittatus* (nec Shaw), Berlepsch, J. f. O. 1887, pp. 25, 121 (Lambaré).

*Pyrrhura vittata* (part.) Salvad. Cat. B. Brit. Mus. xx. p. 214; Kerr, Ibis, 1892, p. 140 (Lower Pilcomayo).

*Pyrrhura chiripepé* Salvad. Ibis, 1900, p. 668.

*Pyrrhura vittata chiripepe* Ihering, Revista Mus. Paulista, vi. p. 335.

a. ♂ ad. Sapucay, September 30, 1902.

b, c. ♂; d. ♀ ad. Sapucay, August 1904.

\* Continued from p. 78.

Bill horn-coloured, paler at base of lower mandible; tarsi and feet slate-coloured; iris reddish brown.

This bird seems to be somewhat scarce in Paraguay and was not, apparently, known to Azara.

[This species is met with occasionally in pairs or in small groups of from four to six individuals, but is nowhere common throughout Central Paraguay; it is essentially a forest-loving bird, and I have never seen it on open lands.—*W. F.*]

### 38. PIONOPSITTACUS PILEATUS.

*Psittacus pileatus* Scop. Ann. i. p. 32 (1769).

*Maracana cabexa roxa* Azara, Apunt. ii. p. 437. no. cclxxxiv. (1805).

*Psittacus erythrocephalus* Vieill. N. Dict. d'Hist. Nat. xxv. p. 372 (1817, ex Azara).

*Pionopsittacus pileatus* Salvad. Cat. B. Brit. Mus. xx. p. 340; Ihering, Revista Mus. Paulista, vi. p. 336.

*Prionopsittaca pileata* Berlepsch, J. f. O. 1887, p. 122 (Paraguay).

*a, b.* ♂ ♀ ad. Sapucay, August 17, 1904.

Bill grey; tarsi and feet slate-coloured; iris reddish brown.

### 39. PSITTACULA VIVIDA.

*Psittacus passerina* Linn. Syst. Nat. i. p. 150 (1776).

*Lorito enano* Azara, Apunt. ii. p. 463. no. cclxxxviii. (1805).

*Psittacula passerina* (nec Linn.), Berlepsch, J. f. O. 1887, p. 26 (Lambaré); Salvad. Cat. B. Brit. Mus. xx. p. 245; Ihering, Revista Mus. Paulista, vi. p. 335.

*Psittacula vivida* Ridgway; Berlepsch, Nov. Zool. xv., p. 285, note (1908).

*a.* ♀ ad. Sapucay, April 11, 1903.

Bill pale ash-coloured; tarsi and feet somewhat darker; iris brown.

*b.* ♂; *c.* ♀ ad. Sapucay, April 17, 18, 1904.

Bill greyish white; tarsi and feet slate-coloured; iris brown.

These three examples are in fully adult plumage.

[This species is resident in Paraguay, and is generally to be met with in small flocks of from fifteen to twenty individuals. Their favourite haunts are clumps of low bushes in the open camps, their plumage mingling so well with the foliage that they are hard to detect until they fly screaming away. Although the bird is so common, I know nothing of its nesting-habits.—*W. F.*]

40. *CERYLE AMERICANA.*

*Alcedo americana* Gm. Syst. Av. i. p. 451 (1788: Cayenne).

*Martin-pescador verde obscuro* Azara, Apunt. iii. p. 389. no. cccxxi. (1805).

*Alcedo viridis* Vieill. N. Dict. d'Hist. Nat. xix. p. 413 (1818, ex Azara).

*Ceryle americana* Berlepsch, J. f. O. 1887, p. 23 (Lambaré); Sharpe, Cat. B. Brit. Mus. xvii. p. 131 (1892); Ihering, Revista Mus. Paulista, vi. p. 335.

*a.* ♂ ad. Sapucay, April 19, 1903.

Bill and feet black; iris brown.

41. *BARYPHTHENGUS RUFICAPILLUS.*

*Tucano Tutú* Azara, Apunt. i. p. 243. no. lii. (1802).

*Baryphonus cyanogaster* Vieill. N. Dict. d'Hist. Nat. xxi. p. 317 (1818).

*Prionites ruficapillus* Hartl. Ind. Azara, p. 4 (1847).

*Momotus cyanogaster* Scl. P. Z. S. 1857, p. 255 (Paraguay).

*Baryphthengus ruficapillus* Berlepsch, J. f. O. 1887, pp. 22, 121 (Lambaré); Sharpe, Cat. B. Brit. Mus. xvii. p. 330 (1892); Ihering, Revista Mus. Paulista, vi. p. 334 (Paraguay).

*a, b, c.* ♂; *d.* ♀ ad. Sapucay, April, May, July, and October 1902–04.

Bill black; tarsi and feet purplish slate-coloured; iris ruby-brown.

These four specimens appear to be fully adult, being uniform in colour above, but the cinnamon-rufous band on the lower breast varies both in colour and extent.

[Resident, but not common. This is the Guiratoro (Bull-bird), not so named on account of its voice, but on account of its peculiar nesting-habits. Along the hills at

Sapucay the presence of the bird is at once made known by the enormous excavations, which often measure four feet across, as if a bull in its rage had ploughed up the ground. The entrance is funnel-shaped, and narrows to some six inches in width, and thence has a depth of about eighteen inches, the eggs being laid at the bottom.—*W. F.*]

42. *PODAGER NACUNDA*. — *Nyctibius griseus*

see Butler, *Ibis*, 1930,

384.

*Ibiyau ñacundá* Azara, *Apunt.* ii. p. 544. no. ccxii. (1805).

*Caprimulgus nacunda* Vieill. *N. Dict. d'Hist. Nat.* x. p. 240 (1817); Hartl. *Ind. Azara*, p. 20 (1847).

*Podager nacunda* Berlepsch, *J. f. O.* 1887, p. 19 (Lambaré); Hartert, *Cat. B. Brit. Mus.* xvi. p. 619 (1892); Oates, *Cat. Eggs Brit. Mus.* iii. p. 58 (1903); Ihering, *Revista Mus. Paulista*, vi. p. 332.

a. Ad. Sapucay.

Bill black; tarsi and feet dirty horn-coloured; iris golden yellow.

One egg obtained at Sapucay, October 3, 1903, is pinkish cream-coloured, mottled with reddish brown and underlying spots of lavender-grey. It measures: Axis 1.35 inches; diameter 1.05.

Two eggs collected at Sapucay, October 14, 1903, are cream-coloured, mottled with brown in greater contrast. Axis 1.35 to 1.45 inches; diameter 0.9 to 0.95.

Two eggs procured at Sapucay, October 13, 1903, are pinkish cream-coloured, heavily blotched with brown. Axis 1.45 inches; diameter 1.0.

[A rare bird throughout Central Paraguay. I have only met with two specimens in eight years, but I know of another which was shot at Asuncion.

Occasionally at night it will perch upon some of the tall trees in the forest and give utterance to its peculiar cry, almost like a human cry of pain, gradually falling and dying away into silence.

The common Guarani name for the bird is "Guaimigué," which in Spanish means "que fue vieja,"—an old woman

transformed into the bird, which would account in a way for the strange cry. It is resident, as I have heard its cry in October and shot one specimen in November.—*W. F.*]

#### 43. NYCTIDROMUS DERBYANUS.

*Ibiyau* Azara, Apunt. ii. p. 538. no. cccx. (1805).

*Caprimulgus albicollis* Vieill. (nec Gm.) Enc. Méth. ii. p. 536 (1822 : Paraguay).

*Nyctidromus albicollis* Berlepsch, J. f. O. 1887, p. 120 (Paraguay) ; Hartert, Cat. B. Brit. Mus. xvi. p. 587, part. (1892).

*Nyctidromus albicollis derbyanus* Gould ; Hellmayr, Nov. Zool. xii. p. 297 (1905) ; Ihering, Revista Mus. Paulista, vi. p. 332.

*a.* ♂ ad. Sapucay, October 8, 1902. Iris dark brown.

*b, c.* ♂ ♀ ad. Sapucay, April 1903. Feet dark horn-coloured.

*d, e.* ♂ ♀ ad. Sapucay, March and June 1904.

Four clutches of eggs were collected during the month of October 1903. They vary in ground-colour from greyish pink to creamy, spotted and blotched with pinkish brown and underlying marks of lavender-grey. The measurements are: Axis 1.1 to 1.25 inches; diameter 0.85 to 0.9.

[A fairly common species at Sapucay, frequently met with in the open glades and cattle-tracts in the forest. The eggs, two in number, are laid on the bare ground, but the bird will never rise unless almost stepped upon, and its plumage is hard to detect in the lights and shadows of the woods.—*W. F.*]

#### 44. CAPRIMULGUS PARVULUS.

*Caprimulgus parvulus* Gould, P. Z. S. 1837, p. 22 (Santa Fé, Rio Parana) ; Hartert, Cat. B. Brit. Mus. xvi. p. 574 (1892) ; Ihering, Revista Mus. Paulista, vi. p. 332.

*a.* ♂ ad. Sapucay, November 18, 1902.

Two eggs were obtained on the same date and another clutch on October 12, 1903. They are pale cream-coloured,

blotched with brown and zigzag markings of the same colour, and with underlying blotches of lavender-grey. The measurements are: Axis 1.05 to 1.1 inches; diameter 0.8.

45. *CHÆTURA OXYURA.*

*Vencejillo* Azara, Apunt. ii. p. 515. no. cccvii. (1805).

*Hirundo oxyura* Vieill. N. Dict. d'Hist. Nat. xiv. p. 536 (1817: ex Azara).

*Acanthylis oxyura*, Hartl. Ind. Azara, p. 19 (1847).

? *Chætura andrei meridionalis* Hellmayr, Verh. Orn. Ges. Bayern, viii. p. 150 (1908).

a. ♀ ad. Sapucay, October 26, 1901.

I have not, so far, been able to identify this Swift quite satisfactorily, as there are no specimens of any of the South American species in the National Collection exactly like it. It appears to me, however, that it is the bird mentioned by Azara and described later by Vieillot.

[In October 1901 I met with two specimens of this bird, but know nothing more about it.—*W. F.*]

46. *CHLOROSTILBON AUREIVENTRIS.*

*Ornismya aureiventris* D'Orb. et Lafr. Mag. de Zool. viii. p. 28 (1838).

*Chlorostilbon splendidus* (nec Vieill.); Berlepsch, J. f. O. 1887, p. 18 (Lambaré); Salvin, Cat. B. Brit. Mus. xvi. p. 49 (1892).

*Chlorostilbon aureiventris* Hartert, Tierr., Trochilidæ, p. 71 (1900); Sharpe, Hand-list B. ii. p. 112 (1900).

a. ♂ imm. Sapucay, April 7, 1904.

Bill black at tip, rosy pink at base; tarsi and feet black; iris brown.

Mr. Foster says that he obtained this specimen near the house in which he lived.

47. *HYLOCHARIS RUFICOLLIS.*

*Picaflores pecho de Canela* Azara, Apunt. ii. p. 484. no. ccxc., juv. (1805).

*Picaflores cola de Topacio* Azara, t. c. p. 485. no. ccxc., adult.

*Trochilus ruficollis* Vieill. N. Dict. d'Hist. Nat. vii. p. 362 (1817).

*Chrysuronia ruficollis* Berl. J. f. O. 1887, p. 18 (Lambaré); Salvin, Cat. B. Brit. Mus. xvi. p. 251.

*Hylocharis ruficollis* Sharpe, Hand-l. B. ii. p. 110 (1900); Ihering, Revista Mus. Paulista, vi. p. 332.

a. ♂ ad. Sapucay, March 24, 1904.

Bill rosy pink at base, black at tip; feet black; iris brown.

[This species is fairly common throughout the district, its small nest being usually suspended from a blade of thatching-grass or a piece of string hanging from the roof of a house; in fact, any place seems suitable for it.

Two eggs only are laid. This species is one of the early breeders, incubation having been well advanced in one clutch at the end of September.—*W. F.*]

#### 48. THALURANIA ERIPHILE.

*Ornismya eriphile* Less. Suppl. Ois.-Mouches, p. 148, pl. 25 (1832: Brazil)

*Thalurania eriphile* Salvin, Cat. B. Brit. Mus. xvi. p. 80 part; Hartert, Tierr., Trochilidæ, p. 86 part (1900); Sharpe, Hand-list B. ii. p. 115 part (1900); Ihering, Revista Mus. Paulista, vi. p. 331.

*Chlorostilbon cyanothorax* Bertoni, Aves Nuev. Paraguay, p. 59 (1901), cf. Ihering, l. c.

*Thalurania eriphile eriphile* Hellmayr, Nov. Zool. xv. p. 76 (1908).

a. ♂ ad. Sapucay, March 31, 1904. Wing 2·4 inch, tail 1·6 inch.

Bill and feet black. Obtained in the neighbourhood of a dwelling-house. This specimen is fully adult and in newly moulted plumage. It agrees with the diagnosis of the species given by Mr. Hellmayr (*l. c.*).

Mr. Bertoni was the first to record this bird in Paraguay, when he described it as a new species under the title of *Chlorostilbon cyanothorax* (Aves Nuev. Parag. p. 59). Dr. Ihering, however, is of opinion (*l. c.*) that it is identical with *Thalurania eriphile*.

## 49. TROGON RUFUS.

*Couroucou orange* Levaill. Courouc. et Tourac. part iii. p. 14, pls. 7, 8, 15 (1806).

*Trogon atricollis* Vieill. N. Dict. d'Hist. Nat. viii. p. 318 (1817 : interior of Guiana, Surinam, and Trinidad) ; Grant, Cat. B. Brit. Mus. xvii. p. 455 (1892) ; Sharpe, Hand-l. B. ii. p. 148 (1900).

*Trogon rufus* Gm. ; Berlepsch, Nov. Zool. xv. p. 277 (1908).

a. ♂ ad. Sapucay, July 29, 1904.

Bill greenish yellow ; tarsi and feet slate-coloured ; iris brown.

b. ♀ ad. Sapucay, August 19, 1904.

Bill yellowish green.

c, d. ♂ ad. Sapucay, September 2, 19, 1904.

This bird is new to the avifauna of Paraguay.

[Although not so common as the "Surucura," this species can still be met with occasionally in the large virgin forests along the Cordilleras at Sapucay. I know nothing of the nesting-habits.—*W. F.*]

## 50. TROGON SURRUCURA.

*Surucú* Azara, Apunt. ii. p. 373. no. cclxx. (1805).

*Trogon surrucura* Vieill. N. Dict. d'Hist. Nat. viii. p. 321 (1817 : ex Azara).

*Trogon surucura* Berlepsch, J. f. O. 1887, p. 121 (Paraguay) ; Grant, Cat. B. Brit. Mus. xvii. p. 471 ; Sharpe, Hand-list B. ii. p. 149 ; Ihering, Revista Mus. Paulista, vi. p. 334.

a. ♀ ad. Sapucay, June 10, 1904.

Bill pale slate-green ; iris brown.

b. ♂ ad. Sapucay, July 9, 1904.

Bill greenish grey ; feet slate-coloured ; iris brown.

[Resident and not uncommon in this district, and has been met with close to Asuncion. It is by no means a shy bird and can be approached very closely. When disturbed, its flight is very slow and noiseless, not unlike that of an Owl.

I once met with the nest of this bird in an ants' nest



that had been built on the side of a tree, in the month of November 1904. As this is one of the most difficult of all birds to skin, the collector feels rather sorry than otherwise when a specimen is met with; the skin is about as tough as wet tissue paper, and the feathers fall out in large clusters at the slightest touch. As may be imagined, the patience of the collector is tried to the utmost before the specimen can be put on one side as a good skin.—*W. F.*]

#### 51. COCCYZUS AMERICANUS.

*Cuculus americanus* Linn. Syst. Nat. i. p. 170 (1766: Carolina).

*Coccyzus americanus* Berlepsch, J. f. O. 1887, p. 133 (Buenos Ayres); Shelley, Cat. B. Brit. Mus. xix. p. 308 (1891).

*a. ad.* Sapucay, January 12, 1904.

Bill, lower mandible orange-yellow; feet pale slate-coloured; iris brown.

This species does not appear to have been previously recorded from Paraguay, though known from Argentina. I have compared the specimen with others from North America and find it to be identical both in measurements and colour of plumage. It is fully adult and is moulting its primary-quills and tail-feathers.

[A rare species with us here, inhabiting the large forests. I cannot say with certainty whether it is resident or not.—*W. F.*]

#### 52. COCCYZUS MELANOCORYPHUS.

*Cenicento* Azara, Apunt. ii. p. 368. no. cclxviii. (1905).

*Coccyzus melanocoryphus* Vieill. N. Dict. d'Hist. Nat. viii. p. 271 (1817); Berlepsch, J. f. O. 1887, pp. 24, 121 (Lambaré); Shelley, Cat. B. Brit. Mus. xix. p. 307; Ihering, Revista Mus. Paulista, vi. p. 335.

*a. ♀ ad.* Sapucay, November 7, 1902.

Iris light brown.

*b. ♂ ad.* Sapucay, March 13, 1904.

Bill black; tarsi and feet bluish slate-coloured.

There were previously no examples of this species in the British Museum from Paraguay.

[By no means a common bird, but it can occasionally be met with in the large forests.—*W. F.*]

53. *PIAYA MACRURA*.

*Tingazú* Azara, Apunt. ii. p. 353. no. cclxv. (1805).

*Coccyzus macrocercus* Vieill. N. Dict. d'Hist. Nat. viii. p. 275 part (1817).

*Piaya macroura* Gambel; Berlepsch, J. f. O. 1887, pp. 24, 121 (Lambaré); Ihering, Revista Mus. Paulista, vi. p. 335.

*Piaya cayana macroura* Stone, Proc. Acad. Nat. Sci. 1908, p. 501 (Paraguay).

*a.* imm. Sapucay, November 19, 1902.

*b, c.* ♂ ad. Sapucay, March 1903.

*d, e.* ♂ ♀ ad. Sapucay, April 1903.

*f, g.* ♂ ♀ ad. Sapucay, May 1903.

Bill pea-green; tarsi and feet dark slate-coloured; iris crimson.

*h.* ♂ ad. Sapucay, September 27, 1903.

[This species is the "Tingasú" of Azara, and is very common in all the forests and woods, even in the vicinity of Asuncion. It is a quiet, shy bird, slow in its movements, and with a soft flight. Its long tail does not seem to incommode it in the slightest degree. The favourite perch is close up against the trunk of a tree, its chestnut colour assimilating well with the dark bark. I find it the most parasite-infested of all the "monte" birds, and it seems strange how it can tolerate the hundreds of creeping things which make their appearance about the head and neck after death. Without being absolutely sure, I think that its nest is composed of strips of the thin inner bark of trees and that two eggs are laid of a dull creamy-white colour.—*W. F.*]

54. *DIPLOPTERUS NÆVIUS*.

*Cuculus navius* Linn. Syst. Nat. i. p. 170 (1766: Cayenne).

*Chochi* Azara, Apunt. ii. p. 359. no. cclxvi. (1805), adult.

*Chirri* Azara, t. c. p. 369. no. cclxix., juv.

*Coccyzus chochi* Vieill. N. Dict. d'Hist. Nat. viii. p. 272, adult (1817).

*Coccyzus chiriri* Vieill. t. c. p. 273, juv.

*Diplopterus nævius* Berlepsch, J. f. O. 1887, p. 24 (Lambaré); Shelley, Cat. B. Brit. Mus. xix. p. 423.

*Tapera nævia* Lönnberg, Ibis, 1903, p. 239.

a. Ad. Sapucay, July 31, 1904.

Bill, culminal ridge blackish, buff at gape, lower mandible rosy pink; tarsi and feet pale slate-blue; iris buff.

#### 55. DROMOCOCCYX PHASIANELLUS.

*Macropus phasianellus* Spix, Av. Bras. i. p. 53, pl. xlii. (1824: Tonantins and Solimoëns rivers).

*Dromococcyx phasianellus* Shelley, Cat. B. Brit. Mus. xix. p. 426; Hellmayr, Abhandl. Akad. Wiss. München, xxii. p. 600 (1906); Ihering, Revista Mus. Paulista, vi. p. 335.

*Geophilus jasigatere* Bertoni, Aves Nuev. Paraguay, p. 43 (1901), = *Macropus phasianellus* Spix, Richmond, Proc. U.S. Nat. Mus. xxxv. p. 611 (1908).

a. ♂ ad. Sapucay, August 14, 1904.

Bill black above, purple at point and reddish at base below; tarsi and feet brownish slate-coloured; iris whitish brown.

This bird was originally described by Spix from Brazil, and was not known to occur in Paraguay until Mr. Bertoni (Aves Nuev. Paraguay, p. 43) recorded it as a new species under the name of *Geophilus jasigatere*.

#### 56. CROTOPHAGA MAJOR.

*Crotophaga major* Gm. Syst. Nat. i. p. 363 (1788: Cayenne); Hartl. Ind. Azara, p. 17 (1847); Berlepsch, J. f. O. 1887, pp. 23, 121 (Lambaré); Shelley, Cat. B. Brit. Mus. xix. p. 428; Ihering, Revista Mus. Paulista, vi. p. 335 (1906).

*Annó-guazú* Azara, Apunt. ii. p. 348. no. cclxiv. (1805).

a. ♂ ad. Sapucay, December 31, 1902.

Iris yellowish white.

b. ♀ ad. Ybytími, February 8, 1904.

Bill, tarsi, and feet black; iris pea-green.

[A rare bird, only to be met with along the large water-courses in the forests.—*W. F.*]

## 57. CROTOPHAGA ANI.

*Crotophaga ani* Linn. Syst. Nat. i. p. 154 (1766); Hartl. Ind. Azara, p. 17 (1847); Berlepsch, J. f. O. 1887, p. 23 (Lambaré); Shelley, Cat. B. Brit. Mus. xix. p. 429; Ihering, Revista Mus. Paulista, vi. p. 335.

*Annó* Azara, Apunt. ii. p. 344. no. cclxiii. (1805).

a. ♂ ad. Sapucay, March 27, 1903.

Bill, tarsi, and feet black; iris brown.

b. ♀ ad. Sapucay, April 22, 1903.

c. ♀ ad. ,, April 18, 1904.

The eggs of this species are pale blue, covered with a white chalky substance. The measurements are: axis 1.2 to 1.4 inches; diameter 0.9 to 1.05.

[Communal nest at an elevation of about 18 feet. A number of the birds lay their eggs together until the nest is often so full that many fall out.

The nest is often built in a palm (coco) and is impossible to reach on account of thorns on the trunk of the tree. Boys get the eggs by smashing the nest with stones; they fall out on to the grass and many are unbroken. I have found parasitic eggs on two occasions, but I do not know the parent. As many as twenty eggs are laid in one nest.

This bird is resident and common.—*W. F.*]

## 58. GUIRA GUIRA.

*Cuculus guira* Gm. Syst. Nat. i. p. 414 (1788: Brazil).

*Piririgüá* Azara, Apunt. ii. p. 340. no. cclxii. (1805); Hartl. Ind. Azara, p. 17 (1847).

*Crotophaga piririgua* Vieill. N. Dict. d'Hist. Nat. i. p. 549 (1816, ex Azara).

*Octopteryx guira* Berlepsch, J. f. O. 1887, p. 23 (Lambaré).

*Guira guira* Shelley, Cat. B. Brit. Mus. xix. p. 433; Ihering, Revista Mus. Paulista, vi. p. 335.

A large number of the eggs of this species were sent, collected during the months of October, November, and January. They are deep blue in colour, with a network of white chalky substance distributed irregularly over the entire surface. A few are almost entirely without any chalky

matter, while others are nearly covered with it. The measurements are: axis 1.5 to 1.75 inches; diameter 1.1 to 1.3.

[The nests were usually built in large trees standing alone in the camp. Their presence was often made known by some of the eggs falling to the ground, owing to the large number laid in the nest, which is by no means fit to carry them, as it is a loosely constructed affair.

The species is resident and common. This and the *Crotophaga* often commingle together in one flock, sometimes up to fifty individuals.

The favourite hunting-ground is along the edge of the monte and about open camp.—*W. F.*]

#### 59. RHAMPHASTUS DICOLORUS.

*Rhamphastos dicolorus* Linn. Syst. Nat. i. p. 152 (1766: Cayenne); Berlepsch, J. f. O. 1887, p. 121 (Paraguay); Sclater, Cat. B. Brit. Mus. xix. p. 133; Ihering, Revista Mus. Paulista, vi. p. 334.

*Tucui* Azara, Apunt. i. p. 239. no. li. (1802).

a. ♂ ad. Sapucay, March 29, 1904.

Bill pea-green, with a yellowish tinge; tarsi and feet sky-blue; iris greenish white.

b. ♂ ad. Sapucay, June 29, 1904.

c. ♂ ad. „ August 17, 1904.

[A fairly common bird along the summit of the hills at Sapucay, where it is generally met with in small flocks of about half a dozen individuals. Noisy and pugnacious, it seems to have things all its own way when feeding, no other bird being allowed to approach.

Taken young these fine birds can be easily reared, and it is amusing to see large dogs slink away when a bird makes a drive at them with the huge bill opened wide.

Their food is generally fruit, but I think that many caterpillars are devoured as well, and in captivity individuals evince a decided partiality for meat.

*Rhamphastus toco* Gm. is not uncommon in the southern part of the Republic, but seldom comes north through Central Paraguay. In this district I have rarely met

with it, although some years ago I found it common through the orange-groves at Villa del Pelar, in the Province of Neembucú.—*W. F.*]

60. *PTEROGLOSSUS CASTANOTIS.*

*Pteroglossus castanotis* Gould, P. Z. S. 1833, p. 119 (Brazil); Sel. Cat. B. Brit. Mus. xix. p. 140; Ihering, Revista Mus. Paulista, vi. p. 335.

*Pteroglossus attalorhynchus* Bertoni, Aves Nuev. Paraguay, p. 29 (1901); Ihering, l. c.

a. ♀ ad. Sapucay, June 23, 1904.

[Another of the Toucans which is not at all uncommon in this locality. The habits of this and the preceding species appear to be about the same.—*W. F.*]

61. *BUCCO CHACURU.*

*Chacuru* Azara, Apunt. ii. p. 330, no. cclxi. (1805).

*Bucco chacuru* Vieill. N. Dict. d'Hist. Nat. iii. p. 239 (1816, ex Azara); Berlepsch, J. f. O. 1887, pp. 23, 121 (Lambaré); Sel. Cat. B. Brit. Mus. xix. p. 191; Oberh. Proc. U.S. Nat. Mus. xxv. p. 127 (1902: Sapucay); Ihering, Revista Mus. Paulista, vi. p. 334.

a. ♀ ad. Sapucay, October 26, 1902. Iris grey.

b. ♀ ad. „ December 3, 1902. Iris light brown.

c, d. ♂ ♀ ad. „ April 17, 22, 1904.

e, f. ♂ ad. „ June 5, 25, 1904.

Bill bright orange-red, upper mandible black at tip; tarsi and feet greenish; iris dirty white.

[Resident and frequently met with along the forest-streams, where the small crabs, and insects flying over the surface of the water form its principal food.—*W. F.*]

62. *NONNULA RUBECULA.*

*Bucco rubecula* Spix, Av. Bras. i. p. 51, pl. 39. fig. 1 (1824).

*Nonnula rubecula* Sel. Cat. B. Brit. Mus. xix. p. 200; Ihering, Revista Mus. Paulista, vi. p. 334; Hellmayr, Abhandl. Akad. Wiss. München, xxii. p. 598 (1906).

*Microtrogon fulvescens* Bertoni, Aves Nuev. Paraguay,

p. 41 (1901), = *Bucco rubecula* Spix, Richmond, Proc. U.S. Nat. Mus. xxxv. p. 622 (1908).

a. ♂ ad. Sapucay, December 3, 1902. Iris light brown.

b. ♂ ad. „ April 28, 1904.

c. ♂ ad. „ May 3, 1904.

Bill black, greyish blue at base ; tarsi and feet greenish-white.

d, e. ♀ ad. Sapucay, June 1904.

f. ♀ ad. „ July 2, 1904.

g, h. ♀ ad. „ August 1904.

[Resident and not uncommon in the neighbourhood of Sapucay, but I have never met with it in other parts. It lives in the depths of the large forests and is never found near the edge. I have found beetles and crabs in the gizzard of this species, but I know nothing of its nesting-habits.—*W. F.*]

#### 63. COLAPTES CAMPESTRIS.

*Carpintero campestre* Azara, Apunt. ii. p. 311. no. ccliii. (1805).

*Picus campestris* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 101 (1818, ex Azara).

*Colaptes campestris* Berlepsch, J. f. O. 1887, p. 121 (Paraguay) ; Hargitt, Cat. B. Brit. Mus. xviii. p. 23 ; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♀ ad. Sapucay, March 31, 1903.

b, c. ♂ ♀ ad. Sapucay, April 19, 24, 1903.

Bill dark horn-coloured ; feet slate-coloured ; iris brown. Shot in open camp.

#### 64. COLAPTES AGRICOLA.

*Geopicos agricola* Malh. N. Classif., Mém. Acad. Metz, 1848-1849, p. 359.

*Colaptes agricola* Hargitt, Cat. B. Brit. Mus. xviii. p. 25 ; Kerr, Ibis, 1892, p. 135 (Fortin Donovan).

a. ♂ ad. Sapucay, April 20, 1903.

Bill horn-coloured ; feet dirty slate-coloured ; iris brown. Shot in open camp.

b. ♂ ad. Ybytimi, February 11, 1904.

Bill black ; tarsi and feet pale slate-green ; iris brown.

[Resident and common throughout Paraguay. Lives exclusively on open lands and rarely or never enters the woods. Its food consists entirely of small ground insects, burrowing wasps, larvæ of flies, &c. It much prefers the clinging to the perching position, its favourite places being solitary dead trees.

This species is generally seen in pairs and often in small flocks of from six to ten individuals. The flight is quick and undulating, and its loud harsh cries can be heard a long distance away.

In Central Paraguay the nest is invariably in a hole of one of the dead trees and never in the bank of a stream. The eggs, five to seven in number, are white and highly polished.—*W. F.*]

65. *CHLORONERPES AURULENTUS.*

*Carpintero verde dorado* Azara, Apunt. ii. p. 318. no. cclvi., male (1805).

*Carpintero dorado pardo* Azara, t. c. p. 320. no. cclvii., female.

*Picus auratus* Vieill. (nec Linn.), N. Dict. d'Hist. Nat. xxvi. p. 70 (1818), ex Azara, no. cclvii., female.

*Picus aurulentus* Temm. Pl. Col. iv. pl. 59. fig. 1 (1823: Paraguay and Brazil).

*Chloronerpes aurulentus* Berlepsch, J. f. O. 1887, p. 120 (Paraguay); Hargitt, Cat. B. Brit. Mus. xviii. p. 79; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♀ ad. Sapucay, April 3, 1903.

Bill horn-coloured, lighter below; feet olive-green; iris brown. Shot in monte.

b. ♀ ad. Sapucay, June 6, 1904.

Bill black, grey below; tarsi and feet dry pea-green.

c. ♀ ad. Sapucay, August 19, 1904.

[This species is rare with us, and I know nothing about it. It is to be met with only in the depths of the large forests.—*W. F.*]



## 66. CHRYSOPTILUS CRISTATUS.

*Carpintero verdinegro* Azara, Apunt. ii. p. 306. no. cclii. (1805).

*Picus cristatus* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 98 (1818, ex Azara).

*Chrysoptilus melanochlorus* (nec Gm.), Hartl. Ind. Azara, p. 16 (1847); Hargitt, Cat. B. Brit. Mus. xviii. p. 110; Ihering, Revista Mus. Paulista, vi. p. 333 (Paraguay).

a, b. ♀ ad. et imm. Sapucay, November 1902.

c. ♀ ad. Sapucay, December 1, 1902.

d. ♀ ad. „ April 19, 1903.

Bill black; feet greenish yellow; iris brown.

e. ♀ ad. Sapucay, May 7, 1903.

Bill horn-coloured; feet dirty pea-green.

f. ♂ ad. Ybytimi, February 14, 1904.

g. ♀ ad. Sapucay, April 6, 1904.

h. ♂ ad. „ August 28, 1904.

The immature bird, obtained on November 9, has a small bill. The nasal plumes, which are much more developed in the young, appear to wear off in older specimens, leaving the nostrils somewhat exposed. Throat dull white, streaked with black, more pronounced in the old bird. The under surface is dull greenish yellow, and the black markings are pear-shaped. As the bird advances in age these black markings become large rounded spots and the entire under surface, including the throat, is rich golden yellow.

The feet of the young bird are pale horn-coloured in the dried skin, in the adult they are dark lead-coloured.

[This species is resident and the most common of our Woodpeckers excepting *Colaptes agricola*; it can be met with in the small second-growth woods close to Asuncion. Although it is common, I have never found its nest.—W. F.]

## 67. MELANERPES CANDIDUS.

*Picus candidus* Otto, in Buffon's Naturg. Uebers. xii. p. 251, pl. xxiii. (c. 1772).

*Carpintero blanco y negro* Azara, Apunt. ii. v. 315. no. cccliv. (1805).

*Picus dominicanus* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 72 (1818).

*Leuconerpes candidus* Berlepsch, J. f. O. 1887, p. 21 (Lambaré).

*Melanerpes candidus* Hargitt, Cat. B. Brit. Mus. xviii. p. 148; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♂ ad. Ybytimi, February 6, 1904.

b. ♂ ad. Sapucay, March 22, 1904.

Bill horn-coloured above, slaty below; tarsi and feet pea-green; iris white.

[This peculiar Woodpecker appears at very long intervals at Sapucay, and always in flocks of from ten to fifteen individuals, never alone. It has the reputation of living principally upon bees and wasps, and breaking open the nests, built in the trees, to get at the larvæ—its gregarious habits somewhat bearing out this statement. I met with it during the month of January in a small wood some six miles from Asuncion and have seen it in different months of the year at Sapucay, but in the southern parts of the Republic I never saw one.—*W. F.*]

#### 68. MELANERPES FLAVIFRONS.

*Carpintero vientre roxo* Azara, Apunt. ii. p. 316, no. cclv. (1805).

*Picus flavifrons* Vieill. N. Dict. d'Hist. Nat. xxvi. p. 75 (1818: Brazil).

*Melanerpes flavifrons* Berlepsch, J. f. O. 1887, p. 120 (Paraguay); Hargitt, Cat. B. Brit. Mus. xviii. p. 161; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♂ ad. Sapucay, November 29, 1902.

b. ♂ ad. „ May 30, 1903.

Bill horn-coloured above, slate-coloured below; tarsi and feet greenish slate-coloured; iris warm brown.

c. ♂ imm. Sapucay, March 22, 1904.

d. ♀ ad. „ April 25, 1904.

e. ♂ ad. „ May 8, 1904.

f. ♂ ad. „ June 5, 1904.

g. ♀ ad. „ August 25, 1904.

[This species is not uncommon in the large forests of Central Paraguay. The Woodpeckers differ so slightly in their habits that there is but little to say about them, unless their nests are found. They are among the early breeders; I found one nestling able to fly and in fairly advanced plumage on the 5th of November, 1901.—*W. F.*]

69. *VENILIORNIS OLIVINUS*.

*Picus olivinus* Malh. Mém. Soc. Roy. Sc. Liège, 1845, p. 67.

*Chloronerpes olivinus* Berlepsch, J. f. O. 1887, pp. 20, 120 (Lambaré).

*Dendrobates olivinus* Hargitt, Cat. B. Brit Mus. xviii. p. 356; Kerr, Ibis, 1892, p. 136 (Fortin Nueve).

*Veniliornis olivinus* Sharpe, Hand-list B. ii. p. 222 (1900); Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♂ ad. Sapucay, October 29, 1902.

b. ♂ ad. „ March 28, 1903.

Bill horn-coloured above, slate-coloured below; tarsi and feet dark slate-coloured; iris brown.

c. ♀ ad. Sapucay, April 21, 1904.

d. ♂ ad. „ May 5, 1904.

e. ♀ ad. „ June 8, 1904.

f, g, ♂; h. ♀ ad. Sapucay, July 2, 26, 1904.

i, k. ♀ ad. Sapucay, September 3, 7, 1904.

70. *VENILIORNIS SPILOGASTER*.

*Picus spilogaster* Wagl. Syst. Av., *Picus*, sp. 59, p. 33 (1827: Brazil and Paraguay).

*Dendrobates spilogaster* Hargitt, Cat. B. Brit. Mus. xviii. p. 358.

*Veniliornis spilogaster* Sharpe, Hand-l. B. ii. p. 222 (1900); Oberh. Proc. U.S. Nat. Mus. xxv. p. 128 (1902: Sapucay).

a, b. ♀ ad. Sapucay, April 5, 20, 1903.

Bill black above, whitish grey below; feet slate-coloured; iris brown.

c. ♂ imm. Sapucay, March 12, 1904.

d, e. ♂ ♀ ad. „ May 2, 4, 1904.

f. ♀ ad. „ June 24, 1904.

[This species, although somewhat rare, can, in common with all the Woodpeckers, be easily found when present, on account of its tapping when in search of food.

Both this bird and *V. olivinus* inhabit the large dense forests of Central Paraguay. It is harder to obtain than the larger Woodpeckers, on account of its custom of keeping among the higher branches of the trees. I have met with it from March to September.—*W. F.*]

71. *CELEUS KERRI*.

*Celeus kerri* Hargitt, Ibis, 1891, p. 605 (Rio Pilcomayo); Kerr, Ibis, 1892, p. 136, pl. iii. (near Fortin Donovan).

*Celeus lugubris* Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♂ ad. Sapucay, November 15, 1902.

Iris dark crimson.

b. ♀ ad. Sapucay, December 1, 1902.

Iris ruby-brown.

c. ♂ ad. Sapucay, March 27, 1903.

d. ♀ ad. „ May 8, 1903.

Bill light slate-coloured; feet dull black; iris brown.

e. ♀ imm. Ybytimi, January 29, 1904.

Bill slate-coloured above, paler below; tarsi and feet dark slate-coloured; iris brown.

f, g. ♂ ♀ ad. Sapucay, August 17, 20, 1904.

[This is another of our rare Woodpeckers, whose favourite haunts are the larger forests. The young, previous to their first moult, are much lighter in colour, with the edges of the feathers on the breast and belly tipped with rufous, while the rufous bars across the primaries are much wider, and the crest is fully half an inch shorter. The upper tail-coverts of the immature bird are of an entirely dark chestnut, whilst the adult bird has large black patches on each of these feathers, the ground-colour of which is the same.—*W. F.*]

72. *CAMPOPHILUS ROBUSTUS*.

*Carpintero y cuello roxos* Azara, Apunt. ii. p. 301. no. ccl. (1805).

*Picus robustus* Licht. Verz. Doubl. p. 10 (1823: Bahia).

*Campophilus robustus* Hartl. Ind. Azara, p. 16 (1847); Berlepsch, J. f. O. 1887, p. 120 (Paraguay); Hargitt, Cat. B. Brit. Mus. xviii. p. 477; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♂ ad. Sapucay, October 14, 1902.

b. ♂ ad. „ March 25, 1903.

Bill cream-coloured to grey at base, darker above; feet dark slate-coloured; iris yellow.

c. ♀ ad. Sapucay, May 6, 1903.

d, e. ♀ ad. „ July 17, 19, 1904.

f. ♂ ad. „ September 3, 1904.

[Another of the large Woodpeckers, only to be met with in the virgin forests.—*W. F.*]

### 73. CEOPHLEUS LINEATUS.

*Picus lineatus* Linn. Syst. Nat. i. p. 174 (1766: Cayenne).

*Carpintero negro* Azara, Apunt. ii. p. 294. no. cexlviii. (1805).

*Ceophlæus lineatus* Berlepsch, J. f. O. 1887, p. 23 (Lambaré); Hargitt, Cat. B. Brit. Mus. xviii. p. 508; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♀ ad. Sapucay, May 2, 1903.

Bill dark grey above, light beneath; tarsi and feet dark slate-coloured; iris white.

b. ♂ ad. Sapucay, June 22, 1904.

c. ♀ ad. „ August 29, 1904.

[This species occurs in the same localities as *C. erythropeus*, but is much rarer. It can easily be distinguished, even in the dim forests, by the white band down either side of the wing-coverts.—*W. F.*]

### 74. CEOPHLEUS ERYTHROPEUS.

*Picus erythropeus* Valenc. Dict. Sci. Nat. xl. p. 178 (1826).

*Ceophlæus erythropeus* Hargitt, Cat. B. Brit. Mus. xviii. p. 512; Ihering, Revista Mus. Paulista, vi. p. 333.

a. ♀ ad. Sapucay, October 23, 1902.

b. ♂ ad. „ May 4, 1903.

Bill dark grey above, pale below; tarsi and feet slate-coloured; iris white.

c. ♂ ad. Sapucay, March 14, 1904.

Bill horn-coloured above, grey below ; tarsi and feet slate-coloured ; iris orange-white.

d. ♀ ad. Sapucay, August 18, 1904.

e. ♂ ad. ,, September 11, 1904.

Bill slaty horn-coloured above, whitish grey below ; tarsi and feet slate-coloured.

Three eggs, obtained on the 23rd of October, 1902, are glossy- or ivory-white in colour with a few dark minute dots, and measure : axis 1·1 to 1·2 inches ; diameter 0·95.

[This fine species occurs all through Central and Southern Paraguay and in the large forests is not uncommon. Owing to the strength of this bird, its tapping can be heard at a great distance, making it easy to secure specimens.—*W. F.*]

#### 75. *CEOPHLEUS GALEATUS.*

*Picus galeatus* Temm. Pl. Col. iv. pl. 171 (1823 : Brazil).

*Ceophleus galeatus* Hargitt, Cat. B. Brit. Mus. xviii. p. 513 ; Ihering, Revista Mus. Paulista, vi. p. 333.

*Campephilus rufifrons* Bertoni, Aves Nuev. Paraguay, p. 49 (1901) ; teste Ihering, l. c.

a. ♂ ad. Sapucay, July 7, 1904.

Bill whitish at point, grey at base.

b. ♀ ad. Sapucay, August 22, 1904.

Bill creamy grey ; tarsi and feet slate-coloured ; iris reddish brown.

[Another of our very rare Woodpeckers, and I know nothing much about it yet.—*W. F.*]

#### 76. *PICUMNUS PILCOMAYENSIS.*

*Picumnus pilcomayensis* Hargitt, Ibis, 1891, p. 606 (Rio Pilcomayo) ; Kerr, Ibis, 1892, p. 138 (Fortin Page).

*Picumnus cirratus* (nec Temm.), Oberh. Proc. U.S. Nat. Mus. xxv. p. 128 (1902 : Sapucay).

*Picumnus cirrhatus* Ihering, Revista Mus. Paulista, vi. p. 334.

a. ♀ ad. Sapucay, December 9, 1902.

*b, c.* ♂ ♀ ad. Ybytimi, February 4, 7, 1904.

♂. Bill black above, slate-coloured below; tarsi and feet slate-coloured.

♀. Bill buff, black above; tarsi and feet bluish slate-coloured.

[This species is not uncommon through the large forests. Its habits are slightly different from those of the Woodpeckers proper, as it perches and hunts for food more along the branches than on the trunks of trees. It is a very shy bird and the slightest unusual rustling noise will at once cause it to cease pecking, when owing to its small size it is not easily discovered. It is protected by a particularly offensive odour, such as arises from a place infested by cockroaches, but much stronger; this smell becomes less evident after the bird is skinned, but often lasts for years.

The nest is a hole made in a tree to the depth of some six or eight inches, two white eggs being laid; there is no lining other than the chips of wood.—*W. F.*]

[To be continued.]

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XI.—*On the Monkey-eating Eagle of the Philippines* (Pithecophaga jefferyi \*). By D. SETH-SMITH, F.Z.S., M.B.O.U.

(Plate IV. and Text-fig. 4.)

THE acquisition, by the Zoological Society of London, of a fine living specimen of the magnificent Monkey-eating Eagle, seems to present a fitting opportunity of collecting together the few scattered notes that have been published on this remarkable species, and of figuring it from life.

*Pithecophaga jefferyi* was described at the Meeting of

\* *Pithecophaga jefferyi* Ogilvie-Grant, Bull. B. O. C. vi. p. xvii (1896); Ibis, 1897, p. 214, pl. v.; Whitehead, Ibis, 1899, p. 91; Mearns, Proc. Biol. Soc. Wash. xviii. p. 76; Clemens, Condor, ix. p. 92; McGregor, Philipp. Journ. Sc., Oct. 1907, p. 297.